Intrusiveness of Rheumatoid Arthritis on Sexuality in Male and Female Patients Living with a Spouse

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Objective. *To determine whether physical disability, pain, depressive mood, and criticism by the spouse are differentially related to intrusiveness of rheumatoid arthritis (RA) on sexuality in male and female patients.*

Methods. *Physical and psychological aspects of health were assessed in 102 male and 118 female RA patients who were living with a spouse. Patients were classified into 3 levels of intrusiveness of RA on sexuality. The data were analyzed by means of analysis of covariance and multiple regression analysis.*

Results. *Greater intrusiveness of RA on sexuality was related to greater physical disability, pain, and depression in male and female RA patients. Female patients, compared with male patients, appeared to have lower levels of mobility and self-care. Male and female patients did not differ in their level of intrusiveness of RA on sexuality.*

Conclusion. *Physical disability, pain, and, to a lesser extent, depression were found to contribute to intrusiveness of RA on sexuality. It is suggested that differences in sexual motivation between men and women might have been influential in the absence of gender differences in intrusiveness.*

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INTRODUCTION

Characteristic problems in patients with rheumatoid arthritis (RA) are physical disability, pain, depression, and social isolation. Pain and physical disability produce changes in almost every domain of life. Sexual function is one such area that affects the quality of life of many RA patients and their spouses. In contrast with the research interest in the sexual functioning of patients with chronic diseases such as diabetes and renal disease, only a small number of studies have been undertaken as yet in patients with arthritis.

Two early studies documented low levels of sexual quality of life among arthritis patients (1–2). In their study of sexuality in men and women with arthritis, Ferguson and Figley found that 54% of women and 56% of men experienced sexual problems involving pain or weakness, problems with the partner, and fatigue (1). Yoshino and Uchida noted that half of the female RA patients in their study reported decreases in sexual desire and orgasm and lower frequencies of intercourse, in comparison to the period before their illness (2). In these studies, rheumatic disease patients were not compared with individuals who were free from chronic illness, making it difficult to determine to what extent sexual problems can be attributed to the symptoms of rheumatic disease.

Elst et al compared sexual motivation in RA patients with that in healthy age- and sex-matched controls (3). In their study, RA patients showed a more averse attitude toward sexual interaction and a shorter foreplay period than healthy controls. Additional interviews

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brought to the fore that patients wished to reach orgasm quickly because prolonged sexual activity caused too much pain. No differences were found between RA patients and healthy controls with regard to orgasmic intensity and intercourse frequency. In a study by Blake et al, arthritis patients reported levels of satisfaction and sexual activity that were not significantly different from those of individuals in the comparison group (4). However, arthritis patients differed from their arthritis-free peers in their greater sense of loss of sexual satisfaction and pleasure over time. Majerovitz and Revenson found that rheumatic disease patients experienced about the same levels of sexual satisfaction as a comparison sample (5). Among the RA patients, however, greater functional disability was related to greater sexual dissatisfaction. There is some evidence that pain and limited range of motion, besides making intercourse difficult, may also interfere with sexual pleasure by distracting patients from pleasurable sensations, sexual thoughts, and fantasies. Sjögren and Fugl-Meyer, for example, demonstrated that in patients with chronic back pain, both men and women began to assume a "spectator" role during love-making (6).

The general picture that emerges from the findings of all these studies is that satisfaction and intercourse frequency are about the same in RA patients as in comparison groups (1–6). Patients with RA, however, do differ from their arthritis-free peers in that they report a more averse attitude, a shorter foreplay period, and less pleasure than their arthritis-free peers. In addition, findings from cross-sectional studies indicate that physical disability and pain make it difficult to have intercourse, and decrease sexual desire and pleasure in patients with RA.

Besides physical disability and pain, numerous psychological explanations have been offered for the relatively high incidence of sexual problems in RA patients. Reduced or absent sexual desire may also be caused by the patients' depression or by a conflicting partner relationship. There is some evidence that patients with RA have increased levels of depression compared to sex- and age-matched samples of the general population (7). A loss of ability to experience pleasure is a characteristic feature of depressed patients that might lead to decreased sexual desire. The effect of the relationship with the partner on depression has been documented in several studies (8). In addition, Manne and Zautra found that women who perceived that their husbands responded to the arthritis in a critical and unsupportive way were more distressed, and that their husbands were more distressed as well (9).

Differences in sexuality between men and women have consistently been described in the general population (10). In reviewing a large sample of studies on gender differences in sexuality by means of a meta-analysis, Oliver and Hyde found no differences in satisfaction, minor to moderate differences in incidence and frequency of intercourse, and the largest gender differences in the frequency of masturbation. More specifically, men reported higher frequencies of intercourse and masturbation than women (10). Schover and Jensen suggest that the traditional pattern of many couples, in which the responsibility for initiating sex is the man's, may work well until the spouse becomes ill (11). When men become ill, they often stop initiating sex. Wives, however, may not feel comfortable in taking over the role of the initiator and keeping sexual feelings alive. In patients with RA, gender differences in sexuality may also be influenced by differences in the physical expression of rheumatic disease. In this regard, there is some evidence that female patients, in comparison with male patients, have lower levels of physical ability (12). Taking these findings and suggestions into consideration, it is relevant to control for gender differences in the study of sexuality in RA patients.

The present study attempts to clarify the effect of physical disability, pain, depression, and criticism by the spouse on the sexual intrusiveness of RA in male and female patients. Its purpose is twofold. First, it attempts to investigate differences in physical ability, pain, depression, and criticism by the spouse between patients who experience different levels of intrusiveness of RA on sexuality. It was hypothesized that greater physical disability, pain, depression, and criticism by the spouse were related to greater intrusiveness of RA on sexuality. Second, male and female differences in factors contributing to intrusiveness of RA on sexuality are explored. Given the limitations of the existing literature, no directional hypotheses were formulated.

PATIENTS AND METHODS

Patient population. Five hundred randomly selected RA outpatients from the departments of rheumatology of 4 hospitals in Utrecht, which are cooperating in the Rheumatologic Research Foundation Utrecht, were asked to participate in the study. The diagnosis of RA was made by a rheumatologist according to the criteria of the American College of Rheumatology (formerly, the American Rheumatism Association) (13). Patients received letters from their rheumatologists in which they were requested to participate in a study investigating quality of life. Written consent was obtained from 426 patients. These patients were sent a

Table 1. Characteristics of the 220 rheumatoid arthritis (RA) study patients*

	Male RA patients (n = 102)	Female RA patients (n = 118)
Age, mean (SD)	60.80 (11.00)	56.60 (13.40)
Disease duration, mean (SD)	12.50 (10.80)	14.50 (12.50)
Educational level, mean (SD)	2.21 (0.93)	2.01 (1.03)
Present medication, no.		
No medication	11	13
Only NSAIDs	29	27
NSAIDs + DMARDs	53	74
Other	6	7

* For educational level, 1 = primary education, 2 = lower general secondary education, 3 = higher general secondary education, 4 = pre-university education, 5 = university education. NSAIDs = nonsteroidal antiinflammatory drugs; DMARDs = disease-modifying antirheumatic drugs.

self-report questionnaire (14,15) and were requested to complete it and return it by mail.

Three hundred sixty-two patients completed the questionnaires. Comparison of patient records of the 500-patient sample and the remaining sample of 362 patients revealed no differences in sex, age, and duration of RA (13). From the remaining pool, only those patients were selected who lived with a spouse and who met the following criteria: at least 21 years of age, disease duration of at least 2 years, and onset of RA after age 18. This procedure resulted in a sample of 102 male and 118 female outpatients. Table 1 presents the demographic and clinical data for the 220 study subjects.

Measures. Physical and psychological aspects of health were measured with a Dutch health status questionnaire, the IRGL (Invloed van Reuma op Gezondheid en Leefwijze [Impact of RA on General Health and Lifestyle]) (14,15). The IRGL is partly derived from the Arthritis Impact Measurement Scales (AIMS) (16) and consists of 21 items for the Physical Health dimension (which give 3 scales: mobility, self-care, and pain), 22 items for the Psychological dimension (which make up the scales of anxiety, depression, and cheerfulness), 13 items for the Social Health dimension, and 9 items referring to the impact of RA on daily activities. In the present investigation, the following IRGL scales were used: mobility (lower extremities) and self-care (upper extremities), pain, depression, and 1 item from the AIMS referring to the intrusiveness of RA on sexuality ("In general, the rheumatic disease interferes with my sexuality"). Items were rated on a 4-point scale, ranging from 1 = almost never to 4 = almost always. In previous research, the reliability and validity of the IRGL scales were shown to be highly satisfactory (14).

In addition, a scale reflecting criticism by the spouse when the patient was in pain (range 2–8) was included. The criticism scale was developed in previous research and consists of the items: (a) ignores me, and (b) shows his or her irritation (17).

Relatively high scores on the scales for pain, depression, intrusiveness, and criticism by the spouse represent relatively high levels of dysfunction. Relatively high scores on the scales for mobility and self-care represent relatively high levels of physical function.

Background information was also assessed for each patient. The following data were recorded: age, gender, education level, duration of RA, and type of rheumatologic medication used.

Statistical analysis. Statistical analyses were performed on an IBM computer with a standard SPSS-X package; the actual tests applied are mentioned in the results section. Unless stated otherwise, specific results of statistical tests are considered to be significant at $P \leq 0.05$.

RESULTS

The 102 male and 118 female patients were categorized into 3 groups according to their scores on the sexuality intrusiveness scale of the IRGL: (a) patients almost never experiencing intrusiveness (37% male, 30% female), (b) patients sometimes experiencing intrusiveness (32% male, 34% female), and (c) patients often or almost always experiencing intrusiveness (30% male, 36% female). Gender, type of medication, age, and duration of RA were equally distributed among the 3 intrusiveness categories (respectively, $\chi^2 = 1.58$, df = 2, $P = 0.45$; $\chi^2 = 9.02$, df = 6, $P = 0.17$; $F = 1.09$, df = 2, $P = 0.34$; and $F = 0.48$, df = 2, $P = 0.62$). No significant differences between male and female patients were found with regard to education level ($F = 0.50$, df = 1, $P = 0.25$), duration of RA ($F = 1.63$, df = 1, $P = 0.20$), or type of rheumatologic medication ($\chi^2 = 1.55$, df = 3, $P = 0.67$).

Male patients were found to be significantly older than the female patients ($F = 6.76$, df = 1, $P = 0.01$); therefore, differences between groups were assessed by means of ANCOVA, with age as a covariate. The mean scores and standard deviations for the scales representing physical disability, pain, depression, and criticism by the spouse are shown in Table 2. F values for covariates, differences between male and female patients (gender), differences between intrusiveness

Table 2. Mean (SD) scores on scales for physical functioning, depression, and criticism by the spouse in rheumatoid arthritis (RA) patients, by degree of intrusiveness of RA on sexuality

	Intrusiveness on sexuality					
	Males (n = 102)			Females (n = 118)		
	None (n = 38)	Sometimes (n = 33)	Often/ always (n = 31)	None (n = 35)	Sometimes (n = 40)	Often/ always (n = 43)
Mobility	19.35 (7.16)	18.91 (5.96)	15.55 (6.39)	20.89 (6.32)	17.13 (6.12)	13.28 (6.47)
Self-care	25.43 (8.07)	25.91 (6.16)	23.16 (7.05)	25.89 (5.68)	23.43 (6.18)	20.53 (6.21)
Pain	14.42 (4.67)	15.73 (3.92)	17.32 (3.55)	14.57 (4.19)	15.93 (4.43)	17.63 (4.45)
Depression	4.34 (5.19)	3.46 (4.40)	5.74 (4.12)	3.20 (3.97)	2.55 (2.98)	5.88 (5.56)
Criticism by spouse	2.62 (1.19)	2.67 (1.19)	2.82 (1.28)	2.59 (1.19)	2.53 (1.06)	3.07 (1.44)

groups, and gender by intrusiveness interaction are shown in Table 3.

The covariate age was found to be significant for mobility and self-care. Controlling for age, significant differences in mobility and self-care were found between male and female patients. No significant differences in pain and criticism by the spouse were revealed between male and female patients. In addition, no significant interaction effects between gender and intrusiveness levels were found with regard to the dependent variables.

Controlling for age, significant differences between the 3 intrusiveness groups were found for mobility, self-care, pain, and depression. As can be seen in Table 2, patients with high levels of intrusiveness on sexuality reported less mobility and self-care, and more pain and depression than did patients with relatively low levels of intrusiveness. No differences between intrusiveness groups were revealed with regard to criticism by the spouse. In order to examine differences between intrusiveness groups, post hoc Student-Newman-Keuls tests ($P < 0.05$) were applied to the adjusted means. Patients who often or almost always experienced intrusiveness of RA on sexuality were found to differ significantly from both the patients who sometimes experienced intrusiveness and those who almost never experienced intrusiveness on sexuality, with regard to mobility, self-care, pain, and depression.

There is evidence in the literature that the independent variables in our investigation are interrelated. In previous research, it was shown that physical disability, pain, and depression were interrelated (11). A multiple regression analysis procedure was used to examine the relative contribution of mobility, self-care, pain, and depression with regard to intrusiveness of RA on sexuality (18). Hierarchical regression analysis was conducted on the combined data for the male and female patients. The independent measures were consequently entered into the equation to predict the dependent variable intrusiveness on sexuality. The number of cases (n = 220) to independent variables ratio (1:55) was found to be highly satisfactory. The linear combination of these variables significantly predicted level of intrusiveness on sexuality ($F = 19.41$, $P < 0.001$, $R^2 = 0.15$). Univariate tests of the independent variables revealed that only mobility ($t = -5.21$, $P < 0.001$, R^2 change = 0.13) and depression ($t = 2.05$, $P < 0.05$, R^2 change = 0.02) contributed significantly to intrusiveness.

Table 3. Results of analyses of covariance: F values

	Age (covariate)	Gender	Intrusiveness	Gender × intrusiveness
Mobility	31.12*	4.01†	15.09*	2.22
Self-care	12.51*	5.58†	5.77‡	1.31
Pain	0.10	0.18	8.63*	0.01
Depression	0.04	1.1	7.47*	0.42
Criticism by spouse	0.11	0.0	1.82	0.48

* $P < 0.001$.
† $P < 0.05$.
‡ $P < 0.01$.

DISCUSSION

This study was designed to investigate the relationship between intrusiveness of RA on sexuality and physical disability, depression, and criticism by the spouse. Intrusiveness of RA on sexuality was reported frequently or almost always by 30% of the male and 36% of the female outpatients. Consistent with the hypothesis, mobility, self-care, pain, and depression were contributing variables to intrusiveness on sexuality in RA patients. More specifically, patients who frequently or almost always reported an impact on sexuality were found to differ significantly on these variables from patients who indicated almost never or no intrusiveness on sexuality. These results corroborate the detrimental effects on sexuality of physical disability and pain found in previous research in RA patients (1–5).

Earlier studies have revealed that mobility, self-care, pain, and depression are to some extent interrelated in RA patients (12). Regression analysis showed that 15% of the variance in intrusiveness on sexuality could be explained by the combination of mobility and depression. In addition, further analysis revealed that mobility was the main contributing variable. Noteworthy is the rather low amount of explained variance of intrusiveness (15%) on sexuality. This finding suggests that other factors, which were not measured in our study, contribute substantially to intrusiveness of RA on sexuality. One possibility to consider in further research is the patient's level of sexual activity before the onset of arthritis and the present sexual satisfaction and activity of the spouse.

Although in the literature, sexual problems are generally related to conflicts in the partner relationship, it was found that criticism by the spouse was not related to intrusiveness on sexuality. A possible explanation for this negative finding is that the variable "criticism by the spouse when in pain" did not reflect deeper and more pervasive conflicts in the partner relationship.

The level of intrusiveness of RA on sexuality did not differ between male and female patients, nor did they differ in the variables contributing to it. Female patients, however, reported lower levels of mobility and self-care than did male patients. The nonsignificant findings with regard to male–female differences in intrusiveness are in contrast with male–female differences in intercourse frequency in the general population. A possible explanation is that gender differences in sexuality were not revealed in our study because we investigated the amount of intrusiveness of RA on sexuality and not the actual levels of sexual activity. Even if this had been the case, it remains unclear why male and female differences in mobility and self-care were not reflected in gender differences in intrusiveness. A possible explanation is that differences in sexual motivation between both sexes are an influence. There is suggestive evidence that the need for maintaining an intimate relationship with the spouse is stronger in women than their need for sexual arousal. A woman may perceive it as her solemn duty to take care of her partner, including his sexual needs (19). Further research in which various sexual behaviors and the phases of the sexual response cycle (sexual desire, sexual arousal, orgasm, and resolution) are studied more systematically might shed light on this issue.

A few methodologic caveats should be mentioned. We used self-report measures and a cross-sectional design. With regard to the latter, no causal interpretations can be made. The established relationship between depression and intrusiveness may be recursive in nature; that is to say, higher levels of depression may lead patients to view the intrusiveness of RA in a more negative light. Furthermore, sexual intrusiveness of RA was assessed by a single, global item. A possible advantage of this procedure is the rather high response rate (72%), compared with a response rate of about 50% in other surveys (5). Disadvantages are that it was impossible to estimate the measure's reliability and that no information was obtained with regard to various sexual behaviors and the phases of the sexual response cycle.

Some implications of our findings can be drawn for the clinician dealing with sexuality in patients with RA. It goes without saying that the patients' mobility, self-care, and pain are very important. In the case of low levels of mobility and self-care and high levels of pain, standard management strategies (e.g., medication and physical therapy) may be applied. In addition, patients and spouses might benefit from sexual counseling, which is preferably provided within the context of a broader medical and cognitive-behavioral program (11). Suggested components of such a program would be educating patients and their spouses about: (a) the effects of medication, pain, and physical limitations on one's sexual functioning, (b) alternate positions for intercourse that are in accordance with principles of joint protection, and (c) focusing on pleasurable sensations or fantasies instead of on painful zones. However, whether the suggested program can be applied successfully with RA patients remains to be demonstrated.

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